Thinking is Driven by Questions

As TAs, we are often leading classes described as “discussion sections.” Unfortunately, we face the common obstacle of silent and unwilling students, which leaves our discussion to be no more than a monologue of information and answers. We wonder, “Why aren’t they thinking? Why don’t they remember the material I have already explained to them?”

- A common misconception is that answers may be taught separately from questions. This leads to instructors over-emphasizing “coverage” over “engaged” or “critical thinking.”
  - Every declarative statement may be phrased as a question. For example, the statement that water boils at 100 degrees centigrade is an answer to the question, “At what temperature centigrade does water boil?”
  - Ask more questions! This is the easiest way to engage your students to think. It also lets you know what concepts are more difficult for students and what aspects of the course require more attention.

- Feeding students endless content does not generate thinking. In fact, the opposite tends to occur. Students shut down their thought process in order to copy down the material. Engaging questions immediately bring the material to life and stirs interest.

Things to Try:

- When a student responds with the correct answer a good habit is to ask “why?” or “how did you know that?” This forces students to be able to articulate the reasoning behind their thoughts. It also opens the floor to further questions and comments.
- Start your discussion by writing questions about the material suggested by the students.
- In order to trigger discussion, ask easier questions that are derived from material you expect students to know. This will allow you to:
  - quickly check your students’ understanding of past material.
  - Build upon existing knowledge, hopefully probing towards deeper and more thought-provoking questions.

- Look over your own notes for the discussion and list the major points/concepts you plan to cover. Create a question that specifically targets each of these and try to pose it to the class. We are often surprised to find that our students can articulate profound statements if they are asked the right questions.
- Express questions visually using boards, overheads, etc.
- Take your questions seriously. Wait a sufficient amount of time (at least 3-5 seconds) to give students a chance to think and respond.